



# What Countries Are Doing To Tackle Climate Change

by NPR NEWS STAFF

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While nations wrangle over a new global treaty on climate change, the question on many minds is: What happens next?

Key portions of the Kyoto Protocol are set to expire at the end of 2012. But many of the world's major greenhouse gas emitters have already set national targets to reduce emissions, and they're forging their own initiatives to meet those goals.

Some are focusing on curbing deforestation and boosting renewable energy sources. Several nations are experimenting with cap-and-trade plans: Regulators set mandatory limits on industrial emissions, but companies that exceed those "caps" can buy permits to emit from companies that have allowances to spare. In some cases, it's not clear that countries are doing much to meet their stated climate goals. What *is* clear is that the pledges currently on the table aren't legally binding, and they fall far short of what would be required to stabilize the planet's atmosphere.

Here's a look at what nations are doing:

## Australia

Australia has set a national goal of reducing greenhouse gas emissions by **5 percent below 2000 levels by 2020**.

Australia didn't sign onto the Kyoto Protocol until 2007, after its Labor Party took control of government, reversing the previous administration's policy. Under the climate pact, Australia agreed to hold the growth in its greenhouse gas emissions to 8 percent above 1990 levels for the 2008-2012 period. By and large, Australia has met those targets, mostly by reducing deforestation and land clearing.

In November 2011, Australian lawmakers approved an ambitious carbon trading plan — the world's largest outside of Europe. Under the plan, Australia's 500 worst polluters would be forced to pay a tax on every ton of carbon they emit starting in July 2012. By 2015, the nation plans to move to a full-on, market-based carbon trading system. Australia says it plans to link its carbon market to one set up in neighboring New Zealand. That might make it harder to dismantle the market if conservatives win back control of Australia's government in 2013.

## Brazil

Brazil is aiming to reduce its **emissions to 1994 levels and cut deforestation by 80 percent** from historic highs by 2020.

Brazil's National Climate Change Plan is focused on expanding renewable electric energy sources and beefing up the use of biofuels in the transportation industry. The country is also focusing heavily on reducing deforestation rates: It's hoping to eliminate illegal deforestation and bring the net loss of forest coverage to zero by 2015.

But a proposal to loosen Brazil's deforestation rules is currently making its way through the legislature. If enacted, critics say the changes could create more opportunities for logging.

## Canada

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Canada did little to try to meet its obligations under the Kyoto Protocol. Indeed, today, the country's emissions are 17 percent above 1990 levels — in large part because of emissions tied to the dirty business of extracting oil from Alberta's tar sands.

According to a Canadian government report released in mid-2011, emissions from tar sands will more than cancel out the progress

that Canada has made in shifting its electricity generation from coal to natural gas. By 2020, the report projects that Canada will fall well short of its stated emission-reduction targets.

## China

**China hasn't made any pledges to reduce its carbon emissions.** As its economy grows, emissions will increase. But China has promised to become at least 40 percent more energy efficient by 2015.

China is the world's biggest producer and consumer of coal — and the No. 1 emitter of greenhouse gases and the second-largest consumer of energy. But it's also a developing nation — which means that, like other developing nations, it isn't required to lower its emissions under the Kyoto Protocol.

Still, China's coal resources aren't infinite, and as the country finds itself importing more of the fossil fuel to power its growth, it is also aggressively pursuing renewable energy sources. Chinese leaders have said they want non-fossil fuels to account for 15 percent of the nation's energy sources by 2020. Under a law passed in 2005, Chinese power grid companies are required to purchase a certain percentage of their total power supply from renewable energy sources. And China provides extensive subsidies to its clean energy sector — like the U.S., it hopes that green tech jobs can fuel future growth. Even so, many analysts warn that weaning China off coal won't be easy.

The country has also committed to boosting its forest cover, and it is experimenting with a carbon trading plan: Lawmakers recently approved a pilot program in seven provinces and cities.

## European Union

The EU and its 27 member states have pledged to reduce emissions by **20 percent below 1990 levels by 2020**. The EU has said it would bump this commitment up to 30 percent if other developed countries sign up for similar commitments.

Under the Kyoto Protocol, the then-15 EU member states signed on

to reduce emissions by 8 percent below 1990 levels by 2012. To meet that goal, in 2005 the EU launched the biggest carbon trading market in the world. Today, all 27 member states are required to participate, plus Iceland, Liechtenstein and Norway. Major factories and power plants in the EU are granted permits for how much carbon they can emit. Companies that emit less carbon than their allotted amount can sell their extra carbon credits to firms that exceed their emissions limit.

Starting in January, all airlines with flights that take off or land in Europe will be required to buy carbon permits to offset emissions from their flights. That requirement has sparked objections and legal challenges from several nations that argue it violates international law.

## India

India, like China, also **won't commit to reducing its carbon emissions** — saying that would hurt efforts to bring millions of its citizens out of poverty. But it has agreed to increase its energy efficiency by 20 percent by 2015.

India is the world's No. 3 emitter of greenhouse gases, but because it's a developing nation, it isn't required to cut emissions under the Kyoto Protocol. That said, India is an active participant in the Clean Development Mechanism — a carbon offset plan set up under the Kyoto Protocol. Basically, the CDM lets developing nations like India earn credits for implementing emission-reducing projects. India can then sell those credits to an industrialized nation, which can count them toward its overall emissions-reduction commitment. India has hundreds of CDM projects; almost half of them focus on wind power and biomass.

India has set an ambitious goal of getting 20 gigawatts of solar power online by 2022. A gigawatt of electricity is enough to power a small city. In 2010, the country started levying a carbon tax on coal to help subsidize renewable energy projects.

## Indonesia

Indonesia has pledged to cut emissions by **26 percent by 2020**

**from today's levels.**

Indonesia is home to vast swaths of tropical forests, which suck up atmospheric carbon. But those forests are being logged at an alarming rate — and that's releasing huge amounts of carbon into the atmosphere. Under a deal with Norway that went into effect in May 2011, Indonesia agreed to implement a two-year moratorium on new concessions for clearing forests in exchange for \$1 billion in support for its forest conservation efforts.

But many observers question Indonesia's commitment to preventing deforestation, given that the country's current economic boom has been largely fueled by extraction of its natural resources.

Allegations that Forestry Ministry officials have lined their political war chests with funds raised by selling off logging rights haven't done much to bolster confidence.

## Japan

Japan has pledged to reduce its emissions by **25 percent below 1990 levels by 2020.**

The world's No. 5 greenhouse gas producer, Japan committed to reducing its emissions by 6 percent below their 1990 levels under the Kyoto Protocol, and it was largely on track to meet that goal. In 2010, it launched a cap-and-trade plan aimed at forcing some 1,300 major businesses — including large office buildings, public buildings and schools — in the Tokyo metropolitan region to reduce their emissions.

However, the Fukushima nuclear disaster threw Japan a fastball. The nation relied on nuclear power for about a third of its electricity, but in the wake of the March 2011 accident, the vast majority of its reactors have gone offline. The lost output forced Japan to institute energy-reducing measures and, in the short term, to rely more heavily on fossil fuel-burning power utilities — which boosted its emissions in 2011. With the Japanese public now wary about nuclear energy, the nation's leaders are trying to find a new way forward.

## Russia

Russia has pledged to reduce its emissions by at least **15 percent from 1990 levels** — a year when the Soviet Union was still in existence, and emissions from heavy industry, mostly related to the military, were sky high.

When Russia ratified the Kyoto Protocol in 2004, it pledged to hold its greenhouse gas emissions at or below 1990 levels. After the Soviet Union collapsed, Russia's emissions did, too. So the country hasn't had to do much to meet its Kyoto pledges.

Indeed, Russia has long been known as a country with little regard for environmental concerns, and it is still largely dependent on many heavy industries that are considered major polluters. Despite Russian ratification of the climate pact, for a long time the country's leaders continued to question the human role in climate change.

In 2009, the Russian government quietly reversed that position, adopting a new climate doctrine that seemed to accept human contribution to global warming. The same year, the country pledged to reduce its emissions by at least 15 percent from 1990. However, this pledge still doesn't require any action on Russia's part: By some estimates, the country's emissions remain more than 30 percent below 1990 highs. Though Russia has unveiled energy-efficiency goals, analysts call the country's climate policies "a black hole."

## South Africa

South Africa expects its **emissions to peak between 2020 and 2025**, then remain flat for a decade before dropping off. By 2020, South Africa aims for emissions to top out at levels 34 percent lower than if the country were to take no actions.

South Africa is highly dependent on coal — about 90 percent of its electricity comes from burning the fossil fuel — and it's a major contributor to greenhouse gas emissions in Africa. The nation is slowly studying cleaner energy options and more energy-efficient alternatives. But to move forward with any emission reductions, South Africa says it's going to need funding and support from industrialized nations.

South Africa's renewable energy initiative aims to make clean

power account for nearly 9 percent of the nation's energy mix by 2030. But that project is just getting off the ground: Construction on the first few dozen projects, mostly wind and solar power plants, won't begin until after mid-2012 at the earliest.

The country says it's committed to making nuclear power — which currently supplies about 5 percent of its electricity — a much bigger part of its energy mix in the future. But a shortage of funding may delay those plans.

## United States

The U.S. pledged to **reduce emissions by 17 percent by 2020**, but that promise was contingent on Congress passing an aggressive cap-and-trade bill. Instead, the bill ended up in the trash, and **the U.S. hasn't made it clear how it will meet its emission goals.**

The U.S. has taken some actions at the federal level to curb emissions, including new nationwide fuel-efficiency standards for cars and light trucks. Individual states also have laws designed to lower their emissions in the coming decades. California has the most ambitious plan: Starting in 2013, the state will cap greenhouse gas emissions from factories and power plants, and, eventually, emissions from vehicles.

But even with all those state and federal actions taken together, the World Resources Institute figures that the U.S. can't achieve a 17 percent reduction in emissions by 2020. New federal laws — for example, one that puts a tax on carbon emissions — would need to fill the gap, and prospects for that aren't good.

While nations wrangle over a new global treaty on climate change, the question on many minds is: What happens next? Key portions of the Kyoto Protocol are set to expire at the end of 2012. But many of the world's major greenhouse gas emitters have already set national targets to reduce emissions, and they're forging their own initiatives to meet those goals. Some are focusing on curbing deforestation and boosting renewable energy sources. Several nations are experimenting with cap-and-trade plans: Regulators set mandatory limits on industrial emissions, but companies that exceed those "caps" can buy permits to emit from companies that have allowances to spare. In some cases, it's not clear that countries are doing much to meet their stated climate goals. What *is* clear is that the pledges currently on the table aren't legally binding, and they fall far short of what would be required to stabilize the planet's atmosphere. Here's a look at what nations are doing:

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